



Contingency Plan Guideline

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DRAFT

Foreword

The Canada-Nova Scotia Offshore Petroleum Board and Canada-Newfoundland and Labrador Offshore Petroleum Board (the *Regulators*) have issued this Guideline to assist operators in the development of a contingency plan to meet the requirement of section 11 of the *Canada-Newfoundland and Labrador* and the *Canada-Nova Scotia Offshore Area Petroleum Operations Framework Regulations*. This Guideline applies to all works and activities conducted in the *Offshore Area*.

Guidelines are developed to provide assistance to those with statutory responsibilities (including operators, employers, employees, supervisors, providers of services, suppliers, etc.) under the *Accord Acts* and regulations. Guidelines provide an understanding of how legislative requirements can be met. In certain cases, the goals, objectives and requirements of the legislation are such that no guidance is necessary. In other instances, guidelines will identify a way in which regulatory compliance can be achieved.

The authority to issue Guidelines and Interpretation Notes with respect to legislation is specified by sections 151.1 and 205.067 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act, S.C. 1987, c.3 (C-NLAAIA)*, sections 147 and 201.64 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act, RSNL 1990 c. C-2, subsection 156(1)* and section 210.068 of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, S.C. 1988, c.28 (CNSOPRAIA)* and section 148 and subsection 202BQ(1) of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act*. The *Accord Acts* also state that Guidelines and Interpretation Notes are not deemed to be statutory instruments.

For the purposes of this Guideline, these Acts are referred to collectively as the *Accord Acts*. Any references to the C-NLAAIA, the CNSOPRAIA or to the regulations in this Guideline are to the federal versions of the *Accord Acts* and the associated regulations.

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1.0 Acronyms and Abbreviations

2D/3D/4D	Two, Three and Four Dimensional
API	American Petroleum Institute
CCO	Chief Conservation Officer
C-NLAAIA¹	<i>Canada-Newfoundland and Labrador Atlantic Accord Implementation Act</i>
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CNSOPB	Canada-Nova Scotia Offshore Petroleum Board
CNSOPRAIA²	<i>Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act</i>
COP	Code of Practice
DFO	Fisheries and Oceans Canada
ECRC	Eastern Canada Response Corporation
H₂S	Hydrogen Sulfide
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
ISO	International Organization for Standardization
JRCC	Joint Rescue Coordination Centre
MEDEVAC	Medical Evacuation as interpreted in the <i>Incident Reporting and Investigation Guideline</i>
NAFO	Northwest Atlantic Fisheries Organization
NEBA	Net Environmental Benefits Analysis
NL	Newfoundland and Labrador

¹ References to the C-NLAAIA in this Guideline are to the federal version of the *Accord Act*

² References to the CNSOPRAIA in this Guideline are to the federal version of the *Accord Act*

NS	Nova Scotia
OA	Operations Authorization
OIM	Offshore Installation Manager
OHS	Occupational Health and Safety
RPAS	Remotely Piloted Aircraft Systems
SAR	Search and Rescue
SIMA	Spill Impact Mitigation Assessment
SOLAS	<i>International Convention for the Safety of Life at Sea</i>
STA	Spill-Treating Agent
TQOP	<i>Atlantic Canada Offshore Petroleum Code of Practice for the Training and Qualifications of Offshore Personnel</i>
UNCLOS	<i>United Nations Convention on the Law of the Sea</i>

2.0 Definitions

In this Guideline, the terms such as “authorization”, “chief conservation officer”, “development plan”, “employee”, “employer”, “hazardous substance”, “marine installation or structure”, “oil”, “operator”, “passenger craft”, “petroleum”, “providers of services”, “spill”, “spill-treating agent”, “supervisor” and “supplier”, “workplace” and “workplace committee” referenced herein have the same meaning as in the *Accord Acts*.

Refer also to defined terms in both the *Framework Regulations* and *OHS Regulations*.

For the purposes of this Guideline, the following terms have been capitalized and italicized when used throughout. The following definitions apply:

<i>Accord Acts</i>	means the <i>Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act</i> and <i>Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act</i> , <i>Canada-Newfoundland Atlantic Accord Implementation Act</i> and the <i>Canada-Newfoundland and Labrador Atlantic Accord Implementation (Newfoundland and Labrador) Act</i>
<i>Framework Regulations</i>	means the <i>Canada-Newfoundland and Labrador Offshore Area Petroleum Operations Framework Regulations, SOR/2024-25</i>

	and the <i>Canada-Nova Scotia Offshore Area Petroleum Operations Framework Regulations, SOR/2024-26</i>
Offshore Area	means an offshore area as defined by the <i>Accord Acts</i>
OHS Regulations	means the <i>Canada-Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations, SOR/2021-247</i> or the <i>Canada-Nova Scotia Offshore Area Occupational Health and Safety Regulations, SOR/2021-248</i>
Regulator	means the Canada-Newfoundland and Labrador Offshore Petroleum Board or the Canada-Nova Scotia Offshore Petroleum Board, as the case may be

3.0 Purpose and Scope

The objective of this Guideline is to assist an operator in the development and submission of a contingency plan pursuant to section 11 of the *Framework Regulations*. Contingency plans must accompany an application for an OA pursuant to section 8 of the *Framework Regulations*. This includes the following types of works or activities:

- Production
- Well operations (e.g., drilling, completion, intervention, servicing, testing)
- Diving
- Construction
- Geoscientific
- Geotechnical
- Environmental

In addition to the requirements under section 11 of the *Framework Regulations*, operators should also refer to the following:

- The requirements and associated guidance for documents and emergency response procedures under Part 3 and sections 41, 48 and 49 of the *Framework Regulations*. Refer also to requirements for risk assessments and emergency response equipment in the *Framework Regulations*.
- The requirements and associated guidance for emergency response plans, procedures and equipment under Part 2, 5, 6 and 32 of the *OHS Regulations*.
- The *Accord Acts*³ permit the public release of contingency plans. Therefore, the operator should ensure that any personal information that is protected under federal or provincial privacy legislation and that is necessary to be included within these plans is, to the greatest degree possible, arranged in such a manner to facilitate its

³ C-NLAAIA 119(5)(f); CNSOPRAIA 122(5)(f)

ready identification and redaction. The operator should also ensure that any information that may compromise security is excluded and provided to the *Regulator* by other means.

Emergency Response Plan(s) should consider:

- Associated requirements of flag state, including the *IMO International Convention on Maritime Search and Rescue* and the *ICAO International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual*.
- SOLAS and other associated IMO requirements (e.g., conventions, resolutions and circulars).
- *ISO 15544 Petroleum and natural gas industries - Offshore production installations - Requirements and guidelines for emergency response*, its associated annexes and normative references. While it is mainly focused on offshore production installations, it contains references to best practices that can be applied to all works or activities.

The contingency plan may be submitted to the *Regulator* as one or several documents. All documents that constitute the contingency plan must be listed within the application for an OA that is submitted to the *Regulator*. The document or documents submitted to fulfill the requirement for a contingency plan should be the documents that would be used by all persons including contractors, providers of service and suppliers.

If the operator proposes an amendment to the OA to change the scope of activities, the contingency plan and any associated risk assessments and measures may require amendment to reflect the changes in the scope. The revised contingency plan will be reviewed by the *Regulator* as part of the amendment to the OA and prior to the changes being implemented. Some additional guidance is provided in section 11 of the *Framework Regulations*.

4.0 Types of Events

Pursuant to subsections 11(1) and 11(2) of the *Framework Regulations*, the documents that comprise the contingency plan should include all processes in place to prevent, mitigate or respond to all accidental events, including potential emergencies and major accidental events. This should include, as applicable:

4.1 All Works or Activities

4.1.1. Adverse Physical and Environmental Conditions

Procedures must be developed for dealing with any credible adverse physical and environmental conditions (e.g., seismic, foundation stability, temperature, storms, motion). This should include the procedures for suspending operations, making the installation, vessel or aircraft safe while protecting the environment, and may address disconnection of a floating

platform or flushing risers or flowlines, precautionary reduction of personnel or escape, evacuation and rescue. In addition, any specific physical and environmental condition limitations on the installation, vessel or aircraft or the operation of equipment (e.g., stability, life-saving appliances, fire protection systems, materials handling equipment, elevators, pressure vessels) should be specified or reference made to where these details are located (e.g., safety plan). With respect to measures for dealing with icebergs and pack ice refer to section 4.1.9 of this Guideline. The contingency plan should include the above information and make reference to where more detailed information can be obtained.

Refer to the following:

- For all works or activities, refer to the requirements and associated guidance for observations of physical and environmental conditions under section 42 of the *Framework Regulations*.
- For a drilling, production or accommodations installation, refer to:
 - The requirements and associated guidance provided in sections 104, 105, 106, 109 and 156 of the *Framework Regulations*.
 - In NL, COP – *Best Practice - Newfoundland and Labrador – Offshore Adverse Weather Communications Protocol*.

4.1.2. Simultaneous Operations

Procedures should be developed for dealing with activities that could occur at the same time as other activities and that may pose a threat to the safety of personnel, the installation, vessel or aircraft, or the environment. This should include the following:

- Consideration of concurrent activities such as production, drilling, intervention, diving, geoscientific, lifting or other activity. This should also include consideration of activities being undertaken by divers, as well as transportation of employees, if applicable.
- Consideration of concurrent activities within the same area that should not proceed at the same time, such as hoisting loads near or above producing wellheads, flowlines, piping, process vessels or pipelines.
- Consideration of activities by other installations, vessels or aircraft or other vessels (e.g., fishing vessels and any associated deployed fishing gear) to be conducted in close proximity of the proposed work or activity. This should include consideration of implementing measures that have been agreed with these other affected parties to ensure adequate coordination and cooperation. The agreed procedures should be developed and provided to all personnel. In NL, refer to *One Ocean Protocol for Seismic Survey Programs in Newfoundland and Labrador* for guidance on communications with fishing interests in the area. With respect to interactions with international fishing activities beyond the

200nm limit and with consent from the operator, the C-NLOPB will provide information regarding the scope, purpose, location, installation or vessel involved, timing and nature of the proposed work or activity to DFO for distribution to the NAFO Secretariat.

Refer to the requirements and associated guidance under Part 10 of the *OHS Regulations* and the requirements under paragraph 4(1)(z) and sections 41 and 49 of the *Framework Regulations*. Consideration should be given to implementing a summary of operation boundaries (as referred to in the *International Association of Drilling Contractors Health, Safety and Environment Case*) or equivalent to provide guidance to offshore personnel about which activities can or cannot occur simultaneously. The determination of activities that can or cannot be conducted simultaneously should be supported by the risk management process.

Geoscientific Programs

With respect to geoscientific programs and the associated coordination and cooperation with other agencies or activities occurring in the area at the same time, guidance is provided in the following:

- For 2D, 3D and 4D seismic surveys:
 - The operator should engage with DFO to coordinate geoscientific activities recognizing there may be DFO science surveys ongoing at the same time.
 - Operational arrangements should be developed between the operator, vessel and nearby fishing interests such that they are informed of each other's planned and ongoing activities, if required. The use of a fisheries liaison officer onboard geoscientific vessels and the use of a support vessel (e.g., standby, picket, guard, chase) is considered best practice in this respect. Refer to the requirements and associated guidance under paragraph 41(g) of the *Framework Regulations* if a support vessel is planned to be used.
 - Where more than one survey operation is active in a region, the operator should arrange for a single point of contact for marine users to facilitate communication.

4.1.3. Release of a Hazardous Substance

Procedures must be developed for dealing with the release of any toxic, flammable or combustible substance or other substance that may occur and pose a hazard to individuals (e.g., oxygen-deficient atmosphere, H₂S, flooding, radiation, loss of hydrocarbon containment). If there is a risk, the

contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

Refer to the following:

- For all works or activities, refer to the requirements and associated guidance for chemical substances under section 45 of the *Framework Regulations*.
- For drilling, production and accommodations installations, refer to the requirements and associated guidance for risk assessments under section 107 of the *Framework Regulations*.

4.1.4. Pollution

Procedures must be developed for dealing with an accidental event that may result in pollution. For pollution, an operator is expected to be prepared for such an occurrence based on the hazard and risk analysis conducted pursuant to paragraph 4(1)(m), and the control measures developed pursuant to subparagraph 4(1)(m)(ii) of the *Framework Regulations*. In all cases, the resources and procedures in place should be commensurate with the environmental risk posed by potential pollution associated with the work or activity. If there is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained. Guidance for pollution arising from a spill during production and well operations activities are discussed in Section 4.3.1 of this Guideline.

4.1.5. Fire

Procedures must be developed for dealing with any credible hydrocarbon and non-hydrocarbon fire scenarios that may occur. Guidance on the different types of fire scenarios that should be considered is provided in section 107 of the *Framework Regulations* but operators should note that this section of the regulations is only applicable to an installation. Procedures for dealing with a fire should include steps for suspending operations, evacuation, escape and rescue. The contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

4.1.6. Explosion

Procedures must be developed for dealing with any credible explosion scenarios that may occur. Guidance on the different types of explosion scenarios that should be considered is provided in section 107 of the *Framework Regulations* but operators should note that this section of the regulations is only applicable to an installation. Procedures for dealing with an explosion should also include steps for suspending operations, evacuation, escape and rescue. The contingency plan should describe the procedures in

place and make reference to where more detailed information can be obtained.

4.1.7. Collision with Vessel or Drifting Object

Procedures must be developed for any credible collision scenarios that may occur. Procedures for collision avoidance and vessel traffic management should be developed and include:

- procedures for dealing with authorized and unauthorized vessels or drifting objects (e.g., abandoned vessels);
- procedures for maintaining a radar watch and for plotting targets;
- criteria for declaring collision alerts;
- procedures to alert intruding vessels;
- the role of the standby vessel and/or support vessels, if available;
- procedures for suspending operations, making the installation or vessel safe while protecting the environment, which may include disconnection of the floating platform or flushing risers or flowlines (e.g., t-times), precautionary reduction of personnel, evacuation, escape and rescue; and
- notification procedures between the installation or vessel and the shore base.

The contingency plan must describe the procedures in place and make reference to where more detailed information can be obtained.

Refer to the following:

- For all works or activities, refer to:
 - Requirements and associated guidance on safety zones in section 173 of the *Framework Regulations*.
 - Associated requirements under UNCLOS (www.un.org) and associated coastal state requirements (e.g., Transport Canada's *Collision Regulations* and *Navigation Safety Regulations*).
- For drilling, production and accommodations installations, refer to the requirements and associated guidance for lights and sound-signalling appliances and radars under sections 127 and 128 of the *Framework Regulations*.

4.1.8. Collision with Aircraft

For use of an aircraft to conduct an activity or transport passengers, appropriate collision avoidance procedures and detection systems should be in place to prevent a collision with aircraft, vessels, installations and other obstructions in the flight path. As a minimum, the collision avoidance detection system should include a terrain collision avoidance system (TCAS).

Detailed procedures for instrument meteorological conditions (IMC) approaches to the installation or vessel should be included in the operations manual of the aircraft services provider. Additional guidance on contingency plans for using RPAS is provided in the *Remotely Piloted Aircraft System (RPAS) Guidelines*. RPAS operations should have its own operations manual that includes notification and separation procedures from other aircraft that may be operating within a 7 nm radius of the installation or vessel during RPAS flight operations. If there is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

4.1.9. Collision with Icebergs or Pack Ice

When ice may be present, operators must develop contingency plans for dealing with pack ice and icebergs that take into consideration the requirements of the regulations and associated risk assessments. Such plans should include procedures for suspending operations, making the installation or vessel safe while protecting the environment (which may include disconnection of a floating platform or flushing risers or flowlines, precautionary reduction of personnel, evacuation, escape and rescue). If this is a risk, these contingency plans should describe the procedures in place and make reference to where more detailed information can be obtained.

Refer to the following:

- For all works or activities, refer to the requirements and associated guidance under section 42 of the *Framework Regulations* and *ISO 35104 Petroleum and Natural Gas Industries: Arctic Operations – Ice Management*.
- With respect to a drilling, production or accommodations installation, refer also to the requirements and associated guidance provided in sections 104, 106 and 109 of the *Framework Regulations*.

4.1.10. Loss of or Impairment to Support Craft or Passenger Craft

If aircraft or support vessels are being used, operators should maintain an effective flight following and vessel tracking system to monitor support craft location and status and facilitate mutual aid. Refer also to requirements for passenger craft under paragraphs 50(2)(a) and 51(2)(a) of the *OHS Regulations*.

Procedures must be in place for dealing with any lost or overdue support craft that may occur and for ensuring resources are deployed to locate the missing craft. This should include notification and coordination of associated SAR with JRCC. Procedures should also be in place for dealing with an

impairment to a support craft. While some impairments can be mitigated until the support craft returns safely to shore, mitigations might need to be implemented in the interim, including contact with the JRCC for assistance. For an installation, if there is an impairment to a standby vessel rendering it unable to fulfill its duties and another vessel is not in the field to assume the standby role, additional mitigations should be implemented to reduce the risk of the offshore activity until another standby vessel is available. Refer to the requirements and associated guidance provided for support craft under paragraph 41(g) of the *Framework Regulations*. If there is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

For the use of aircraft, procedures must be in place for dealing with a ditching or crash while *en route* to or from an installation or vessel and for dealing with a crash, whether it be onshore at the landing site or near or onboard the installation or vessel. This should include notification and coordination of associated SAR efforts with JRCC. In the NL *Offshore Area*, operators should maintain a dedicated SAR helicopter on a 24-hour per day basis in support of helicopter operations. This helicopter should be capable of being airborne within 20 minutes. Equipment should include auto-hover, forward looking infrared radar (FLIR), a search light, a rescue winch and survival equipment suitable for deployment from the helicopter.⁴ Refer to the requirements and associated guidance provided under paragraph 41(g) of the *Framework Regulations* for helicopter operations and support craft. If this is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

4.1.11. Impairments to Critical Equipment

Procedures should be in place for dealing with the different types of unplanned impairments to critical equipment or systems, including impairments that occur as a result of another emergency (e.g., collision, fire, explosion). Depending on the severity, contingency plans could include actions such as shutting down high risk activities and making the installation, vessel or aircraft safe while protecting the environment, reducing the number of personnel onboard to those that are essential, or conducting a full evacuation. Some common types of impairments or partial impairments include:

- Loss of structural integrity
- Loss of pressure containment, including loss of support (e.g., drilling riser tensioners) or integrity of the drilling riser onboard a drilling installation
- Failure of rotating equipment
- Failure of electrical equipment

⁴ Refer to recommendations from the *Ocean Ranger Inquiry* and the *Offshore Helicopter Safety Inquiry*.

- Failure of materials handling equipment
- Dropped or swinging objects
- Loss of watertight integrity
- Loss of station keeping, if equipped
- Loss of stability or ballast control, if equipped
- Loss of communications
- Loss of all power, including emergency power
- Loss of primary or secondary well barrier element during well and production operations, if equipped
- Loss of temporary safe refuge, if equipped
- Loss of fire and gas detection systems
- Loss of passive or active fire protection systems
- Loss of evacuation systems
- Loss of equipment critical to prevention of pollution or control or mitigation of pollution once it occurs.
- Loss of towing equipment, if being towed
- Damage to a subsea production system, pipeline or subsea well equipment due to ice, dragged anchor or dropped objects
- Change in composition of well fluids being produced or injected (e.g., formation of H₂S, hydrates) for a production installation
- Loss of pressure, atmospheric contamination or life support system malfunction of compression chambers, dive bells and associated diver equipment, if equipped
- Loss of dive bell, if equipped

If there is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained. For drilling, production and accommodation installations, refer to design operational limits on equipment or systems under section 156 and paragraph 157(1)(d) of the *Framework Regulations*.

For floating drilling and production installations, operators should develop procedures for enacting a controlled or emergency disconnect and the associated limits at which these plans are activated. These plans should consider any pending collision with a vessel, iceberg or other drifting object and the scenarios noted above, which may require the emergency disconnect system to be activated. The procedures should also consider any environmental releases associated with the disconnect and the reliability of these systems (e.g., independent back-up systems such as separate accumulators or secondary release systems should be in place). The contingency plan should describe the procedures in place and include the above information. The contingency plan should also make reference to where more detailed information can be obtained. Refer to the

requirements and associated guidance in sections 73, 138, 146, 147, 148, 149, 150 and 164 of the *Framework Regulations*.

For any floating accommodations installation or support vessel that may be connected via a gangway to a fixed or floating installation, procedures for enacting an emergency disconnect of the gangway should also be in place. If there is a risk, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

4.1.12. Events from Adjacent Installations or Vessels

For any works or activities conducted in close proximity to another installation or vessel (e.g., diving support vessel adjacent to a production installation) or that is connected to another installation via a pipeline, gangway, etc., procedures should be in place to deal with any emergency that may have an impact on the other installation or vessel. Adjacent installations or vessels should consider shutting down normal activities and sharing resources to assist, if needed. The contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained.

4.1.13. Security

Procedures must be in place for dealing with any bomb threats, cybersecurity attacks and terrorism that may occur and for dealing with individuals that may pose a threat to themselves or to others, including while they are being transported. Procedures may be embedded within the security plan for the installation or vessel, which need not be submitted; however, the contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained. Procedures should also be in place for ensuring that any support services (e.g., vessel shore bases, aircraft services) and any associated onshore control centres are secure.

When there is a risk of cybersecurity attack, procedures must be in place for preventing and dealing with a cybersecurity attack. Contingencies should be described for when control and monitoring systems have been affected. The contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained. Refer to the associated guidance referenced under sections 123, 124, 125 and 169 of the *Framework Regulations*.

4.1.14. Rescue Plans for Individuals

Certain activities (e.g., confined space) may require rescue plans to be in place. Before an activity is undertaken, personnel expected to respond to emergencies should be consulted to ensure they are familiar with the plan and have the necessary resources available. The contingency plan must describe the procedures in place and make reference to where more detailed information can be obtained, if certain activities are being undertaken. Examples of rescue plans and procedures that should be in place include:

- **Person Overboard** - Refer to the requirements and associated guidance under section 29 of the *OHS Regulations*.
- **Fall Protection Rescue** - Refer to the requirements and associated guidance under Part 22 of the *OHS Regulations*.
- **Confined Space Rescue** - Refer to the requirements and associated guidance under Part 25 of the *OHS Regulations*.
- **Loss of Dive Bell or Diver** - Refer to the requirements and associated guidance under Part 32 of the *OHS Regulations*.

4.1.15. Epidemic or Pandemic

Procedures should be in place for dealing with communicable diseases including epidemics and pandemics. These should include procedures for dealing with food poisoning, influenza, etc., where several personnel may need to be treated or quarantined. Refer to the “social legislation” (e.g. *Communicable Diseases Act*) as defined and referenced in Part III.1 of the *Accord Acts* for any associated requirements. The contingency plan should describe the procedures in place and make reference to where more detailed information can be obtained. Refer also to requirements and associated guidance under paragraph 32(1)(d) of the *OHS Regulations*.

4.1.16. Major Injuries

Procedures must be in place for dealing with medical emergencies, including consultation with onshore physicians and/or diving physician specialists, as required, and MEDEVACs. The contingency plan should describe the procedures in place and include the associated range, limitations and level of care provided on all types of emergency medical evacuation services, whether it is via vessel or aircraft. It should also make reference to where more detailed information can be obtained.

Refer to the following:

- The requirements and associated guidance for first aid in Part 6 of the *OHS Regulations*.

- For diving projects and decompression sickness, refer to the requirements under Part 32 of the *OHS Regulations*.

4.1.17. Fatalities

Procedures must be in place for dealing with any work-related and non-work-related fatalities that may occur. The contingency plan must describe the procedures in place and make reference to where more detailed information can be obtained. In addition, refer to the *Accord Acts* for requirements in relation to disturbance of the scene for serious injuries or fatalities.

4.2 Well Operations

4.2.1. Shallow Gas Release

For well operations, operators must have procedures for detecting and dealing with shallow gas releases and the use of a diverter system, if applicable. This should include the measures to be taken to detect shallow gas and the procedure for moving off location and/or evacuation, escape and rescue. The contingency plan should include the above information and make reference to where more detailed information can be obtained.

Refer to the requirements and associated guidance under section 73 of the *Framework Regulations*.

4.2.2. Loss of Well Control or Well Barriers

For well operations, operators must develop procedures covering loss of well control or lost circulation and the steps necessary to regain well control, such as drilling a relief well or employing subsea capping and containment. This should include procedures for suspending operations and/or evacuation, escape and rescue. A reference to any standards that are being followed should also be included. The contingency plan should include the above information and make reference to where more detailed information can be obtained.

Refer also to the requirements and associated guidance for source control and containment measures and well control under subsection 11(3) and sections 68 and 73 of the *Framework Regulations*.

With respect to subsection 11(3) of the *Framework Regulations*, the following should be described for source control and containment equipment:

- The arrangements for ongoing inspection, testing and maintenance of the equipment to ensure its readiness.
- The arrangements for ensuring that installations or vessels that may be engaged in relief well drilling, deployment or use of subsea containment equipment or capture of fluids will meet all regulatory requirements of the *Accord Acts* prior to coming into our jurisdiction for the type of activity it is performing. This includes benefits, impact assessments, safety and Certificate of Fitness (if applicable). All efforts should be made to include commitments with respect to these installations or vessels in the contingency plan, benefits plans, impact assessments, environmental assessments and the concept safety analysis, as applicable, and to ensure regulatory requirements will be met and that the deployment time is minimized.

Guidance is also provided in the following references:

- *NORSOK D-010 Well Integrity in Drilling and Well Operations*
- *API RP 17W Recommended Practice for Subsea Capping Stacks*
- *CAPP Best Practice Source Control in Well Planning for Subsea Wells*

4.3 Production and Well Operations

4.3.1. Pollution

Section 4.1.4 of this Guideline applies in respect of all works and activities, including production and well operations, and an operator's contingency plan must include measures to address all pollution risks associated with those works or activities. This section of the Guideline is related to the procedures for responding to spills of petroleum (e.g., crude, refined oil, drilling fluids) in association with authorized production and well operations activities. The contingency plan should include:

- **Scenarios** – descriptions of a variety of both low-probability large-scale events (e.g., blowouts) and more-frequent smaller-scale events.
- **Response resources** – descriptions of the types and quantity of response resources, commensurate with the scenarios referenced and including resources located on site, in the local region, nationally and internationally. For spill scenarios requiring response resources outside of the local region (nationally or internationally), the contingency plan should include measures to verify the availability of these resources and to re-verify their availability periodically. Where response resources are to be obtained from third parties (contractors) or government agencies, pre-arrangements for activation, client priority, cost and de-activation should be made with that third party or that government agency in advance of the program.

- **Countermeasures strategies (conventional)** – descriptions of the strategies that will be used for containment and cleanup and the resources required (equipment and human resources) in reference to the spill scenarios should be provided and include strategies for on-water response at and around the spill site, shoreline response for any shoreline contaminated by spilled petroleum, response in ice-infested waters, if applicable, and for recovery, transport and disposal of waste associated with the response.
- **Countermeasures strategies (STAs)** – descriptions of the scenarios in which a STA would be proposed for use, the efficacy of the use for each scenario, the equipment needed for its deployment and the timeframe for deployment of the required equipment and STA.

The *Regulator* may not consider the use of a STA unless it is listed in the *Regulations Establishing a List of Spill-treating Agents* under the *Canada Oil and Gas Operations Act*.

Pursuant to the *Accord Acts*, the *Regulator* must not permit the use of a STA unless it has, during the consideration of the application for an OA and the associated contingency plan, determined that the use of a STA will achieve a Net Environmental Benefit in certain conditions (scenarios).

Pursuant to the *Accord Acts* and subsection 11(4) of the *Framework Regulations*, if the operator has provided information on the use of an STA in the contingency plan as prescribed and this includes scenario-specific verification tools (e.g., a checklist) to be used at the time of an incident, then the CCO can approve the use of the STA pursuant to section 86 of the *Framework Regulations* as long as the operator completes the scenario-specific verification tool (e.g., checklist) and demonstrates that a net environmental benefit is likely prior to use of the STA. Following completion of the verification, the signed copy of the scenario specific verification tool should be forwarded to the CCO at the earliest opportunity after its completion.

- **NEBA/SIMA** – descriptions of the NEBA or SIMA that was undertaken to determine the efficacy of a variety of spill response methods, including (1) scenarios for the use of those methods and likely outcomes and (2) tools that enable an operator to assess a number of responses and select the approach most likely to achieve a net environmental benefit.

For the use of a STA, the NEBA/SIMA must include a description of a set of scenarios under which a STA would be used, the likely efficacy of that use, and the likely net environmental benefit that could be achieved by its use in those scenarios. The NEBA/SIMA must also include a process for determining the incident-specific efficacy and likely net environmental benefit at the time of an actual incident to support an application to the CCO for an incident-specific approval of STA use. More explicitly, the operator must have developed scenario-specific verification tools or decision aids (checklist, etc.) that can be used at the time of an incident to allow the operator to verify that all of the requirements for CCO approval of STA use pursuant to section 86 of the *Framework Regulations* have been met.

The NEBA/SIMA should also include protocols for monitoring the effectiveness of a STA in treating a spill once it is deployed.

- **Spill trajectory modelling** – a description of potential spill trajectory models based on historical information of weather and ocean conditions to facilitate appropriate initial response decisions. The contingency plan should also include contacts for personnel or contractors capable of providing real-time spill trajectory modelling, and their availability and capability, including the limits on their capability, to conduct real-time oil spill trajectory modelling, using real-time wind and current data, to support spill response operations.
- **Spill environmental effects monitoring** – description and reference to plans for monitoring the environmental effects of any pollution event scenario that is of sufficient size or potential persistence, or both, to constitute a risk of a significant adverse environmental impact.
- **Wildlife response plans** – description and reference to plans for monitoring impacts to wildlife and responding to those impacts, including recovery, handling and treatment of wildlife (e.g., birds, seals, sea turtles, whales) impacted by pollution.
- **Environmental information** – description and reference to environmental information necessary to establish pollution response priorities, including:
 - prevailing physical environmental conditions including prevailing winds and currents in the area of the activity;
 - biological sensitivity charts that identify the areas containing spill-sensitive flora and fauna;
 - socio-economic sensitivity charts that indicate local human uses of the area potentially affected by oil spills;

- physical sensitivity charts that identify shoreline types, coastal currents, ice forms and movement, and the nature of the littoral zone; and
- charts depicting operational resources and considerations.

5.0 Escape, Evacuation and Rescue

For all works or activities, procedures must be in place to ensure that all personnel can safely escape and evacuate from the installation, vessel or aircraft and be rescued. With respect to paragraph 11(2)(f) of the *Framework Regulations*, the contingency plan must include a description of the procedures for coordinating and liaising with all relevant emergency response organizations. As an example, all SAR plans should be coordinated with the JRCC, including those involving a helicopter ditching or loss of or impairment to a support craft, which is mentioned in Section 4.1.10 of this Guideline. In addition:

- For a drilling, production or accommodations installation, refer to the requirements and associated guidance for risk assessments and escape, evacuation and rescue, support craft and rescue boats under paragraph 41(g) and sections 107, 108, 116, 117, 118, 119, 171 and 172 of the *Framework Regulations*.
- For a diving project, refer to requirements and associated guidance for hyperbaric evacuation under Part 32 of the *OHS Regulations*.

6.0 Reporting of Events

With respect to paragraph 11(2)(b) of the *Framework Regulations*, refer to the requirements and associated guidance for the reporting and classification of incidents in section 179 of the *Framework Regulations*.

7.0 Organizational Structure for Emergencies

With respect to paragraph 11(2)(d) of the *Framework Regulations*, the description of the organizational structure, chain of command and resources should include:

- An organizational chart listing both onshore and offshore positions with interfaces to all external resources.
- Succession plans in the event that a position is impacted by an ongoing accidental event for each emergency response position.
- The associated training and competency for each emergency response position and back-up positions.
- A description of mechanisms in place to ensure that personnel are not assigned to emergency response teams with conflicting emergency response duties.

For emergency response teams and associated emergency response training onboard an installation or vessel, and associated support craft, refer to the COP TQOP. Personnel responsible for the management of other emergencies or major accidental events that are not covered by the COP TQOP, such as pollution response, should be trained and

competent. The authority of designated OIMs under section 193.2 (or 198.2) of the *Accord Acts* or other arrangements for command and control (e.g., role of captain) should be clearly reflected in documentation and communicated to onshore and offshore personnel.

8.0 Resources and Equipment

With respect to paragraphs 11(2)(d) and (f) of the *Framework Regulations* and paragraph 18(2)(l) of the *OHS Regulations*, resources and equipment should include the following, as applicable:

- Standby vessels (for drilling, production and accommodations installations)
- Other support craft and associated equipment
- Relief drilling rig
- Contracted spill response services (e.g., ECRC)
- Containment vessels
- Suppliers for STAs
- Aerial STA spraying services
- Aerial pollution surveillance services
- Satellite surveillance services
- Pollution real-time modelling services
- Waste disposal services
- Contracted SAR helicopter
- Contracted medical services
- Emergency medical evacuation services
- Contracted hyperbaric chambers (diving)
- Onshore emergency support centres
- Flight following and vessel tracking services
- Ice management flights and vessels
- Contracted weather forecasting services
- Federal or provincial SAR resources

Further, if the response required to deal with an emergency could escalate and require national or international resources, a tiered structure is commonly used, corresponding to the scale of the incident. This ranges from at-site resources (Tier 1), significant resources sourced nationally (Tier 2 and/or Tier 3) and international resources (Tier 3).

9.0 Mutual Aid Agreements

With respect to paragraph 11(2)(e) of the *Framework Regulations*, when more than one operator is active in an area, operators should have mechanisms to facilitate the effective exchange of information and, if necessary, to share resources such as vessels and helicopters in order to prevent or provide assistance for emergencies. If there are shared resources for spill response, the formal resource sharing agreements among

operators and/or response organizations should be described, as well as key countermeasures equipment.

10.0 Drills and Exercises

With respect to paragraph 11(2)(i) of the *Framework Regulations*, the effectiveness of contingency plans, including the interface between offshore and onshore and associated response organizations, should be tested periodically through drills and exercises. Operators should be able to demonstrate that all accidental event scenarios are tested routinely and that they have the competence and capability within their organization and the resources to respond to emergencies. The contingency plan should describe the frequency of these exercises, including a commitment to conduct an exercise at the onset of the work or activity and regularly thereafter. In addition, refer to the following:

- The requirements and associated guidance for drills and exercises in section 30 of the *OHS Regulations*.
- If a drill is required to be done by a code or standard that has been adopted, then the drill should be carried out as recommended by that code or standard. In the event of a conflict with the regulations, the more stringent requirements apply.
- Records generated from drills and exercises should measure performance against the goals established (e.g., time to muster, time to don an immersion suit, time to evacuate). Operators should also be able to demonstrate performance against established goals from actual events and associated response times.
- Drills should be held at expected and unexpected times and under different conditions to simulate the unusual conditions that may occur in an actual emergency.
- Refer to the COP TQOP for types and frequencies of drills and for the records to be maintained.
- If there is a risk of a hydrocarbon spill, operators should conduct an oil spill countermeasures exercise prior to the start of the program and annually thereafter.
- Operators may undertake their own training and exercises or participate in group exercises with other Operators (e.g., Synergy), but they are responsible to verify their own readiness.
- With respect to different types and associated frequencies of well control drills that should be conducted, refer to *NORSOK D-010 Well Integrity in Drilling and Well Operations* and *API RP 59 Recommended Practice for Well Control Operations*. In addition to the guidance provided in NORSOK and API, periodic weight-up drills should be carried out when using the “wait and weight” method of well control whereby the density of a small quantity of drilling fluid (4.0 – 8.0 m³) is increased by 120 – 240 kg/m³ as a test of the equipment, procedures and the crew’s proficiency in responding to a well kill situation.

11.0 Bibliography

1. *State of Knowledge on Chemical Dispersants for Canadian Marine Oil Spills National Advisory Meeting – National Capital Region, March 1-12, 2021*
2. *API RP 17W Recommended Practice for Subsea Capping Stacks, March 2021*
3. *API RP 59 Recommended Practice for Well Control Operations, May 2006 (Reaffirmed 2023)*
4. *CAPP Best Practice Source Control in Well Planning for Subsea Wells, February 2023*
5. *ICAO International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, 2022*
6. *ISO 15544 Oil and gas industries - Offshore production installations - Requirements and guidelines for emergency response, June 2024*
7. *ISO 35104 Petroleum and Natural Gas Industries: Arctic Operations – Ice Management, October 2018*
8. *NORSOK D-010 Well integrity in drilling and well operations, December 2021*
9. *One Ocean Protocol for Seismic Survey Programs in Newfoundland and Labrador, February 2013*

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